

09/884,429 filed 06/18/2001

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Reply to Final Office Action of 10/25/2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-12 (canceled)

13. (currently amended) A fabrication element comprising a body structure formed by bonding together at least a first and a second substrate, at least one of the first and second substrates having a plurality of components disposed therein or at least partially therethrough, the plurality of components including at least one venting element-disposed-therein or at least partially therethrough, configured to vent one or more bond voids between the bonded substrates, the at least one venting element not in fluid communication with any other component disposed on or at least partially through the first and second substrates.

14-27 (canceled)

28. (previously presented) The fabrication element of claim 79, wherein a volume of at least one of the plurality of venting cavities is at least about $1 \mu\text{m}^3$.

29. (currently amended) A fabrication element comprising a body structure having a microchannel network disposed therein and a venting channel disposed therein or at least partially therethrough, the microchannel network comprising a plurality of microchannels, at least two of which microchannels intersect, the venting channel disposed along at least a portion of a side of one or more of the microchannels such that it does not intersect with any microchannel in the microchannel network.

30. (previously presented) The fabrication element of claim 79, wherein each of the plurality of venting cavities is spaced at least about $10 \mu\text{m}$ apart from one another.

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31. (previously presented) The fabrication element of claim 79, wherein each of the plurality of venting cavities is spaced at least about 5 μm from an edge of a nearest microchannel or a nearest port.

32. (canceled)

33. (previously presented) The fabrication element of claim 29, wherein the venting channel is disposed substantially parallel to one or more sides of the one or more microchannels in the microchannel network.

34. (previously presented) The fabrication element of claim 29, wherein the fabrication element further comprises a first venting channel network, the venting channel comprising a portion of the first venting channel network.

35. (previously presented) The fabrication element of claim 34, further comprising a second venting channel network, at least one venting channel of which is disposed proximal to a second side of the one or more microchannels in the microchannel network.

36. (previously presented) The fabrication element of claim 35, wherein the venting channel of the first venting channel network and the at least one venting channel of the second venting channel network are disposed substantially parallel to the one or more microchannels in the microchannel network.

37. (previously presented) The fabrication element of claim 35, wherein the venting channel of the first venting channel network and the at least one venting channel of the second venting channel network terminate at least about 0.05 mm from an edge of a port when the one or more microchannels in the microchannel network fluidly communicate with the port.

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38. (previously presented) The fabrication element of claim 35, wherein the venting channel of the first venting channel network and the at least one venting channel of the second venting channel network each comprises a width of at least about 5 μm .

39. (original) The fabrication element of claim 35, wherein two or more venting channels in the first or second venting channel networks merge in regions where cross-sectional midpoints of the two or more venting channels are separated by at most about 50 μm .

40. (previously presented) The fabrication element of claim 35, wherein cross-sectional midpoints of the venting channel of the first venting channel network and the at least one venting channel of the second venting channel network are each disposed at least about 60 μm from a cross-sectional midpoint of the one or more microchannels in the at least one microchannel network.

41. (original) The fabrication element of claim 40, wherein the one or more microchannels comprise a width of at least about 60 μm .

42. (original) The fabrication element of claim 35, wherein one or more edges of the body structure comprise at least a third venting channel network comprising one or more venting channels.

43. (original) The fabrication element of claim 42, wherein the one or more venting channels comprise widths of at least about 0.1 mm.

44. (original) The fabrication element of claim 42, wherein the one or more venting channels are disposed at least about 3 mm from the one or more edges of the body structure.

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45. (original) The fabrication element of claim 42, wherein one or more venting channels of the first and second venting channel networks fluidly communicate with the third venting channel network.

46-77 (canceled)

78. (canceled)

79. (currently amended) The fabrication element of claim 2913, wherein the venting element comprises a plurality of venting cavities.

80. (previously presented) The fabrication element of claim 79, wherein a depth of at least one of the plurality of venting cavities is at least about 0.1 μm .

81. (currently amended) A fabrication element comprising a body structure formed by bonding together at least a first and a second substrate, at least one of the first and second substrates having a plurality of components disposed therein, the plurality of components including at least one venting channel network disposed therein to vent bond voids between the bonded substrates, the venting channel network comprising at least two intersecting channels, the venting channel network disposed in at least one of the first and second substrates such that it does not intersect with any other component disposed in the first and second substrates.